



Canadian Payments Association

Association canadienne des paiements

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**STANDARD 006 SPECIFICATIONS FOR MICR-ENCODED PAYMENT  
ITEMS**

**A COMPANION GUIDE**

FEBRUARY 2008

### **1.0 INTRODUCTION**

This document is a compliance guide which is intended as a resource to assist with the planning, design and printing of MICR documents that will conform to Standard 006, "Specifications for MICR-Encoded Payment Items".

This guide highlights and summarizes Standard 006 specifications to help ensure successful cheque test results.

Those parties interested in obtaining more specific information pertaining to the design or production of MICR-encoded documents are referred to Standard 006.

### **1.1 SCOPE AND PURPOSE**

This guide provides an overview of the Standard, instructions for submitting documents to your financial institution for testing, and answers to some frequently asked questions.

This guide is provided for assistance purposes only. Standard 006 should be relied upon for more detailed information concerning cheque design.

### **1.2 BACKGROUND**

In January 2005, the Canadian Payments Association (CPA) published new specifications to help ensure that high quality images of cheques can be captured in an image based clearing environment.

Businesses that are reprinting cheques or ordering a new supply should confirm that their cheques comply with these specifications. To ensure compliance, it is highly recommended that sample cheques be submitted to your financial institution for image and MICR testing.

To assist business customers in making a smooth transition, the CPA has introduced a grace period for "old-format" business cheques until September 2, 2008. This grace period will allow those businesses that are still working on the changes to use up their existing supply of cheques and to complete any required changes.

### **2.0 DOCUMENT TESTING PROCESS**

Each Financial Institution may follow slightly different procedures to ensure that documents meet both the MICR and Image specifications.

#### **What does your Financial Institution need in order to complete your cheque testing?**

In order to complete full MICR and Imageability testing on your cheques, your Financial Institution will require some samples of your cheque stock. Your Financial Institution may request unpopulated and/or populated cheque samples.

A populated cheque sample refers to a cheque sample where all the required payment information has been fully completed (e.g. payment information has been entered on the cheque). The payment information can be either computer generated, or handwritten.

An unpopulated cheque sample refers to a cheque sample that has not been changed from the format provided by the cheque printer (e.g. blank cheque stock).

### **How will your financial institution determine the results of your cheque test?**

This section outlines a typical test process. Please refer to your financial institution for more information on the specific cheque testing process to be followed including the requirements for submitting cheques to be tested.

1. Financial Institutions will likely perform a Dynamic Contrast Ratio (DCR) test<sup>1</sup>. This is a preliminary step to ensure that the cheque image is clutter free or to identify problems in areas of interest that will require further testing.
2. Criteria requiring presence of elements or distance measurements would be verified by visual inspection of data elements or by use of gauges or automated measurement tools.
3. If the results of the DCR test call into question any of the critical areas (e.g. some clutter visible), more detailed testing will be performed on the specific area in question.
4. If deficiencies are identified, testing will result in either a “Fail” or “Caution” depending on the criticality of the area in question.
5. A “Fail” result will mean that cheque samples must be re-printed for subsequent testing. A “Caution” result will mean samples can be used as is, but cautionary areas should be corrected prior to the next re-print of stock.

For more information about cheque testing processes and timelines, please consult with your Financial Institution.

### **3.0 TOLERANCES**

In recognition of the fact that precision is difficult to achieve in some areas of the printing process, CPA members have incorporated some tolerance levels into the testing process.

Allowable tolerance levels are as follows:

1. Document Sizes: 1/16” (1.58mm) tolerance on the size of the documents.
2. MICR Clear Band: 1/16” (1.58mm) tolerance on the height of the 5/8” (15.87mm) MICR clear band.
3. Positioning and spacing of MICR Characters: As already provided for in Standard 006, refer to section 4.0.
4. PCS Levels: A tolerance of 0.02 on all PCS levels. (Exception: A tolerance of 0.07 has been set for any areas on the back of the item which have a maximum PCS of 0.25)
5. Location of Dollar sign: As already provided for in Standard 006, refer to section 5.4.2 or 5.4.3.
6. Positioning of Verification Phrase: 1/16” (1.58mm) tolerance on vertical and horizontal positioning.

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<sup>1</sup> A DCR test is a method of testing the contrast of the foreground to the background at a DCR ratio of .20. The DCR test compares the reflectance of each individual pixel in a cheque image to the average of the background reflectance of 1/8” (3.17mm) area samples over the entire image. When a DCR test is performed, the computer makes a calculation for each pixel, assigning each pixel a value of white or black. The resulting image, displayed for the operator, makes it easy to assess the legibility of the item and is the closest representation of an item’s image produced by image capture devices.

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7. Positioning of Endorsement Line: 1/16" (1.58mm) tolerance on vertical and horizontal positioning.
8. Positioning of Teller Stamp Here Box: 1/16" (1.58mm) tolerance on vertical and horizontal positioning.

Note: These tolerance levels (with the exception of #3 and #5) are not documented in Standard 006. This is due to the fact that the impact of these tolerances in a production environment is unknown. Members may review and adjust tolerance levels if any negative impacts are realized in a full imaging environment. Once more experience is gained in the production environment, consideration will be given to including these tolerances in Standard 006.

### 4.0 STANDARD 006 SPECIFICATIONS

Design Element	Standard 006 Reference	Specification	Tolerance
<b>Date Field</b>			
Presence	(§5.4.1 #6)	There must be a Date Field	
Location	(§5.4.1 #6)	Date Field must be located in top right hand corner of cheque.	
Clear Area	(§2.2)	Minimum 0.10" (2.54mm) around the Date Field	
Format	(§5.4.1 #6)	Must be one of the three accepted numeric representations (YYYYMMDD, MMDDYYYY, DDMMYYYY).	
Payor Filled data in Date Field	(§5.3)	Must contain no slashes (only dots, dashes or spaces are permitted).  Must be minimum 10 point font size, if computer generated.  Must be in dark or black ink (that shows on image).  Must be above date field indicators and to the right of the word "DATE"	
Font Size of word "DATE"	(§5.4.1 #6)	Must be minimum 8 point font size	
Position of word "Date"	(§5.4.1 #6)	Must precede the Date Field.  Must have ¾" (19.05mm) clear area to the left of the word "DATE"	
Date Field Indicators	(§5.4.1 #6)	Must be minimum 6 point font, maximum 8 point font  Must be PCS of 0.60 or more.	PCS 0.02
PCS of Guidance Boxes	(§5.4.1 #6)	If present, must be PCS of 0.30 or less.	PCS 0.02
PCS of Guidance Characters	(§5.4.1 #6)	If present, must be PCS of 0.30 or less.	PCS 0.02
<b>Amount in Figures</b>			
Presence	(§5.4.1 #8)	There must be an Amount in Figures.	
Location	(§5.4.2)	Amount in Figures and its Clear Area must fall within scan area.	Location

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Design Element	Standard 006 Reference	Specification	Tolerance
Outline of Convenience Amount Rectangle	(§5.4.4 Table 1)	If present, must be PCS of 0.30 or less.	PCS 0.02
Size of Convenience Amount Rectangle	(§5.4.2 and 5.4.3)	If Convenience Amount Rectangle is visible it must comply with minimum and maximum dimensions in section 5.4.2 (personal cheque) or section 5.4.3 (business cheque).	
Only one Amount in Figures	(§5.4.1 #8)	Must be only one Amount in Figures within the Scan Area	
Clear Area	(§2.2)	Minimum 0.10" (2.54mm) around the Convenience Amount Rectangle and the Dollar Sign.  If Convenience Amount Rectangle is not visible, 0.10" (2.54mm) will be measured around DIGITS and Dollar Sign	
Payor Filled Information in Amount in Figures Field	(§5.3)	Must be minimum 10 point font size if computer generated  Must be no alphabetic characters  Must be in black or dark ink (that shows on image)	
Dollar Sign	(§5.4.2)	Must be centered vertically on amount in figures.  Must have one unbroken vertical line  Must not be slanted.  Must be PCS of 0.60 or greater  Must be minimum 10 point font	PCS 0.02
<b>Amount in Words Field</b>			
Location	(§5.4.1 #9)	If present, must be to the left of the Amount in Figures, and either above or below the Payee Name Field.	
Clearance	(§2.2)	Must be 0.10" (2.54mm) around the information in the Amount in Words field, if present.	
Contents	(§5.3)	Any asterisks must be BEFORE amount in words.  Must be minimum 10 point font size if computer generated.  Must be in black or dark ink (that shows on image)	
<b>Payee Name Field</b>			
Location	(§ 5.4.1 #7)	Must be to the left of the Amount in Figures	
Clearance	(§2.2)	Minimum 0.10" (2.54mm) around Information in Payee Name Field.	
Payor Filled information in Payee Name Field	(§5.3)	Must be minimum 10 point font size if computer generated.  Must be in black or dark ink (that shows on image)	
<b>Other Layout Requirements</b>			
Signature Line Area	(§5.4.1 #10)	Must be ABOVE 5/8" (15.87mm) MICR Clear Band  It is acceptable to have no line.  It is acceptable for words such as "per" or "authorized signature" to appear in Signature Line Area	1/16" (1.58mm)

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Design Element	Standard 006 Reference	Specification	Tolerance
CPA Member Name	(§5.4.1 #1)	Must be present  Must be PCS of 0.60 or greater  Must be minimum 6 point font size	PCS 0.02
Currency Designation	(§5.4.1 #11)	Must be present on ALL items requiring a currency designation.  CDN items do not require a Currency Identifier, if they have one they must adhere to following as well.  Must be located to the right of or below word "Dollars" OR beneath the Convenience Amount Rectangle, not closer than 0.10" (2.54mm).	
<b>General Requirements</b>			
Cheque Size	(§3.3)	Length must be minimum 6 ¼" (158.75mm) maximum 8 ½" (215.90mm)  Width must be minimum 2 ¾" (69.85mm) maximum 3 ¾" (95.25mm)	1/16" (1.58mm)  1/16" (1.58mm)
Inverse Printing	(§5.3)	Must be no inverse printing in any Areas of Interest.	
Slanted or Italicized Fonts	(§5.3)	Must not be used in any Areas of Interest.	
Security Features	(§5.2)	Must not interfere with any Areas of Interest  Must be no "Void Pantograph" visible on image	
Pre-Printed Information PCS	(§5.1)	Must be minimum PCS of 0.60.	PCS 0.02
Conditional Statements		There must be no conditional statements (Exception: Conditional Statements are permitted on Bank Drafts and Money Orders, Travellers Cheques, and Gift Certificates and Store Coupons. Refer to CPA Rule A1)	
Background of Document	(§5.1 and §5.4.4 Table 1)	Must not interfere with any Data Elements or their Areas of Interest once imaged.  Background in Areas of Interest must be PCS of 0.30 or less.  Pixel Count of Background in Areas of Interest must be 12 or less.  Reflectance in Areas of Interest must be 40% avg. min. Except Amount in Figures which must be 60% min)	PCS 0.02
Paper Quality	(§3.1)	Must comply with specifications outlined in section 3.1	
Carbon Strips	(§3.2)	Must be no carbon strips	
Perforations	(§3.6.1)	Must not have a non-detachable border or statement	
<b>MICR</b>			
MICR Printing	(§4.0)	Must be E-13B  Must be magnetic ink  Must comply with all technical specifications in Section 4.0 and Appendix I	

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Design Element	Standard 006 Reference	Specification	Tolerance
MICR Fields and Positioning	(§4.4)	All mandatory fields must be present.  Positioning must comply with FI Spec Sheets.	
5/8" (15.87mm) MICR Clear Band	(§4.2)	No Borders  No printing in PCS of 0.30 or greater  Guide Marks must not be printed in magnetic ink and if located within the clear band, must adhere to the size and location specified in section 3.6.2.	1/16" (1.58mm)  PCS 0.02
Transaction Code 45	(§4.4.2.1)	Must be present on USD items requiring a Transaction Code 45.  Positioning must comply with FI spec sheets.	
<b>Back of Item</b>			
"Teller Stamp Here Box" Presence	(§5.4.5 #1)	Must be present.	
"Teller Stamp Here Box" Clearance	(§2.2)	Minimum 0.10" (2.54mm) around the "Teller Stamp Here Box"	
"Teller Stamp Here Box" PCS	(§5.4.5 #1)	Must have PCS of 0.25 or less.	PCS 0.07
Endorsement Line Area Presence and Location	(§5.4.5 #2)	Must be present.  Must be no closer than 3.5" (88.90mm) to the left edge and 1.5" (38.10mm) to the bottom edge and 0.5" (12.70mm) to the right edge.	1/16" (1.58mm)
Endorsement Line Area "Phrase"	(§5.4.5 #2)	Phrase must be present	
Verification Phrase Presence and Location	(§5.4.5 #3)	Must be present.  Must be located 1" (25.4mm) from bottom of document and 3.5" (88.90mm) from left edge of document)	1/16" (1.58mm)
Verification Phrase PCS	(§5.4.5 #3)	Must be in PCS of minimum 0.60.	PCS 0.02
Verification Phrase Clearance	(§2.2)	Minimum 0.10" (2.54mm) around Phase	
Verification Phrase Content	(§5.4.5 #3)	Must be one of the variations specified in Standard 006, section 5.4.5	
Verification Phrase Font	(§5.4.5 #3)	Must be minimum 10 point font size.	
Informational Printing greater than PCS 0.60 on Back of Document	(§5.4.5)	If present, must be in upper right hand corner.  Must not interfere with any Areas of Interest	

Design Element	Standard 006 Reference	Specification	Tolerance
1" (25.4mm) Area from Bottom edge of Back of Document	(§5.4.5)	Must be no printing in PCS greater than 0.25 in this area (including MICR bleed through)	PCS 0.07

**5.0 TROUBLE SHOOTING DURING THE CHEQUE DESIGN AND CHEQUE TESTING PROCESS**

In the event that issues are encountered during the cheque design or testing process, the following escalation procedure is recommended:

1. To obtain advice, input, or clarifications on the Standard during the cheque design process.
  - a. Contact your Financial Institution.
  - b. Contact the CPA.
  
2. Cheque printer/customer does not agree with cheque test results:
  - a. Contact Financial Institution for resolution.
  - b. In the event resolution was not achieved, contact the CPA:

If necessary, the CPA will refer the matter to contacts within the Financial Institution in question. [Note: the CPA may provide interpretations of Standard 006; however, the CPA is not in a position to independently verify or arbitrate testing results].

3. To obtain MICR Specification Sheets
  - a. Contact your Financial Institution
  - b. Contact the CPA. The CPA cannot provide MICR spec sheets, but can assist by referring the matter to contacts within the Financial Institution in question.